Fig. 1 (Prior Art)

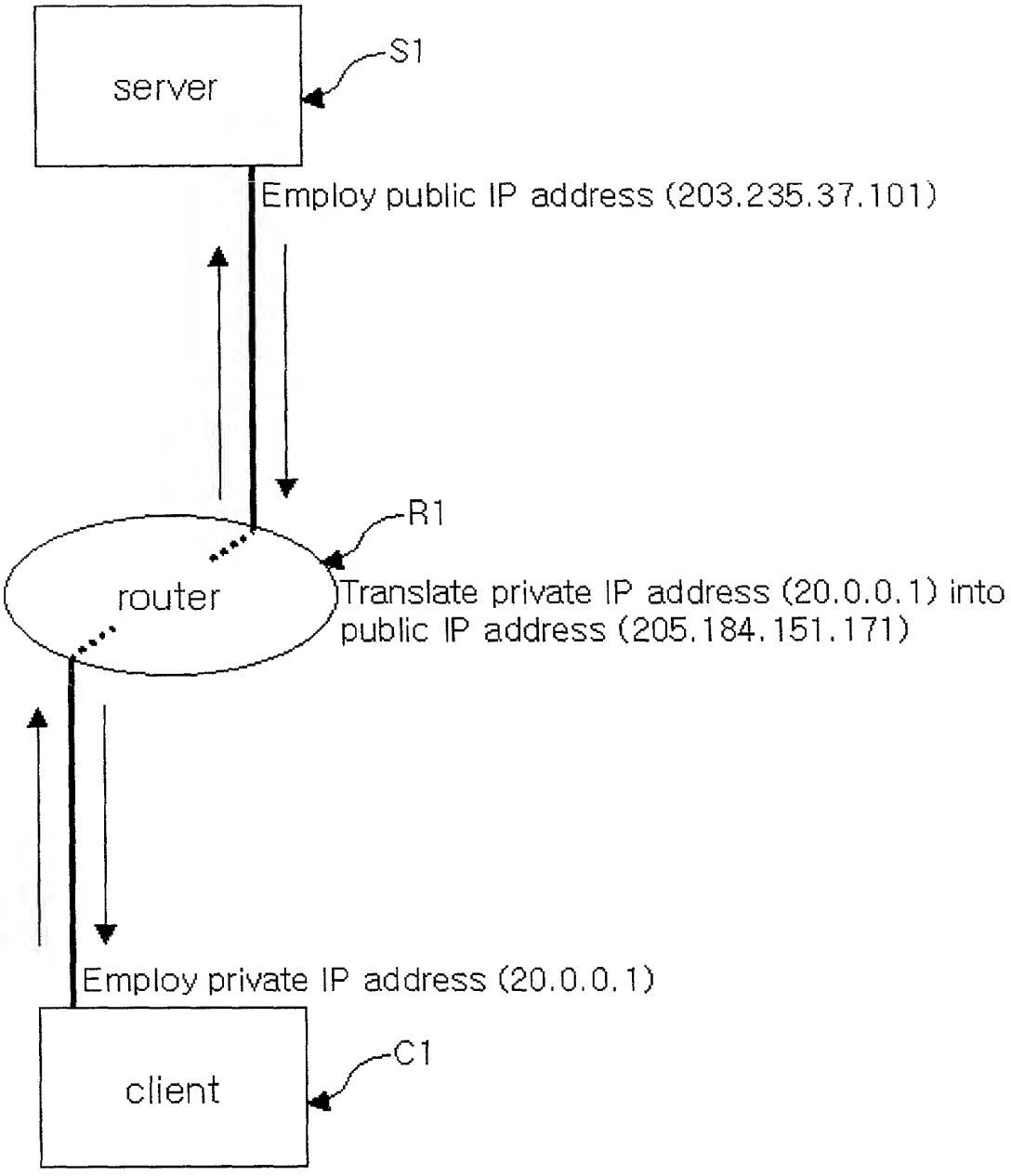


Fig. 2 (Prior Art)

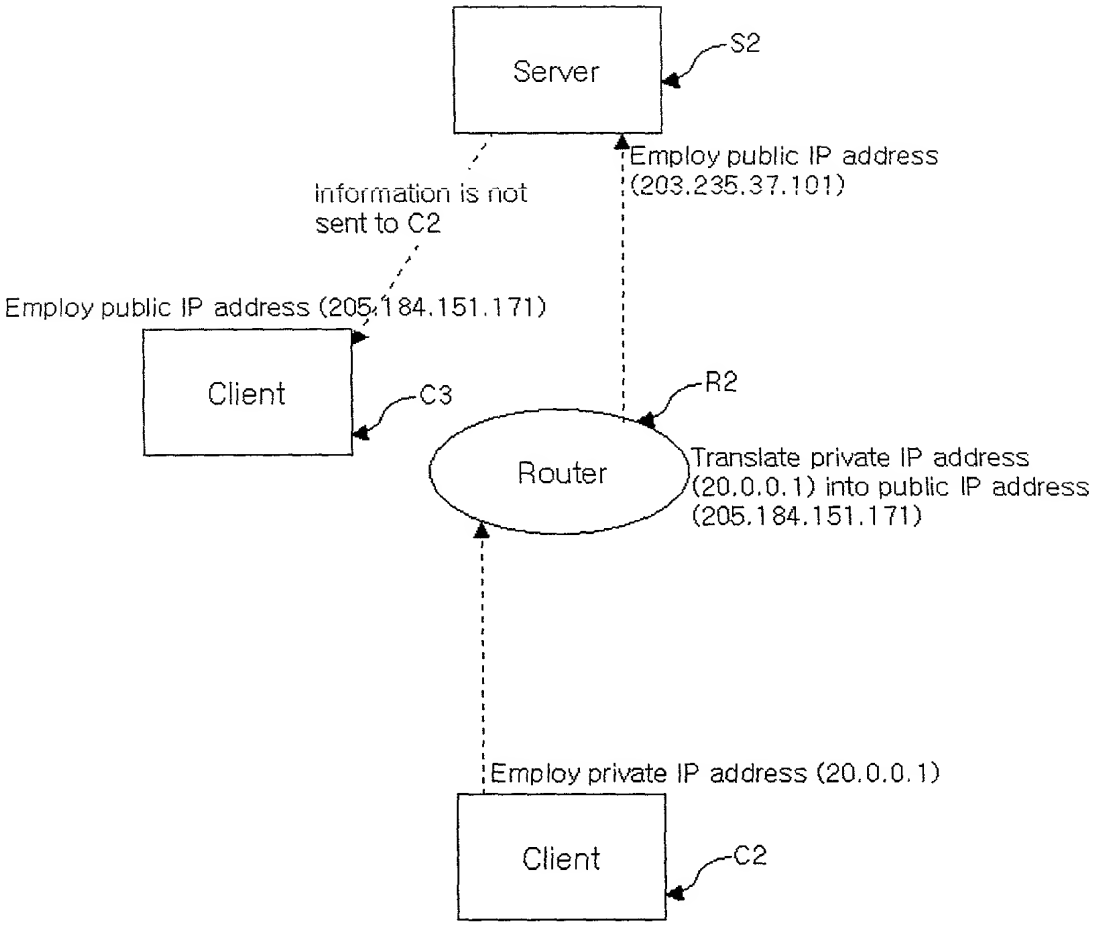


Fig. 3

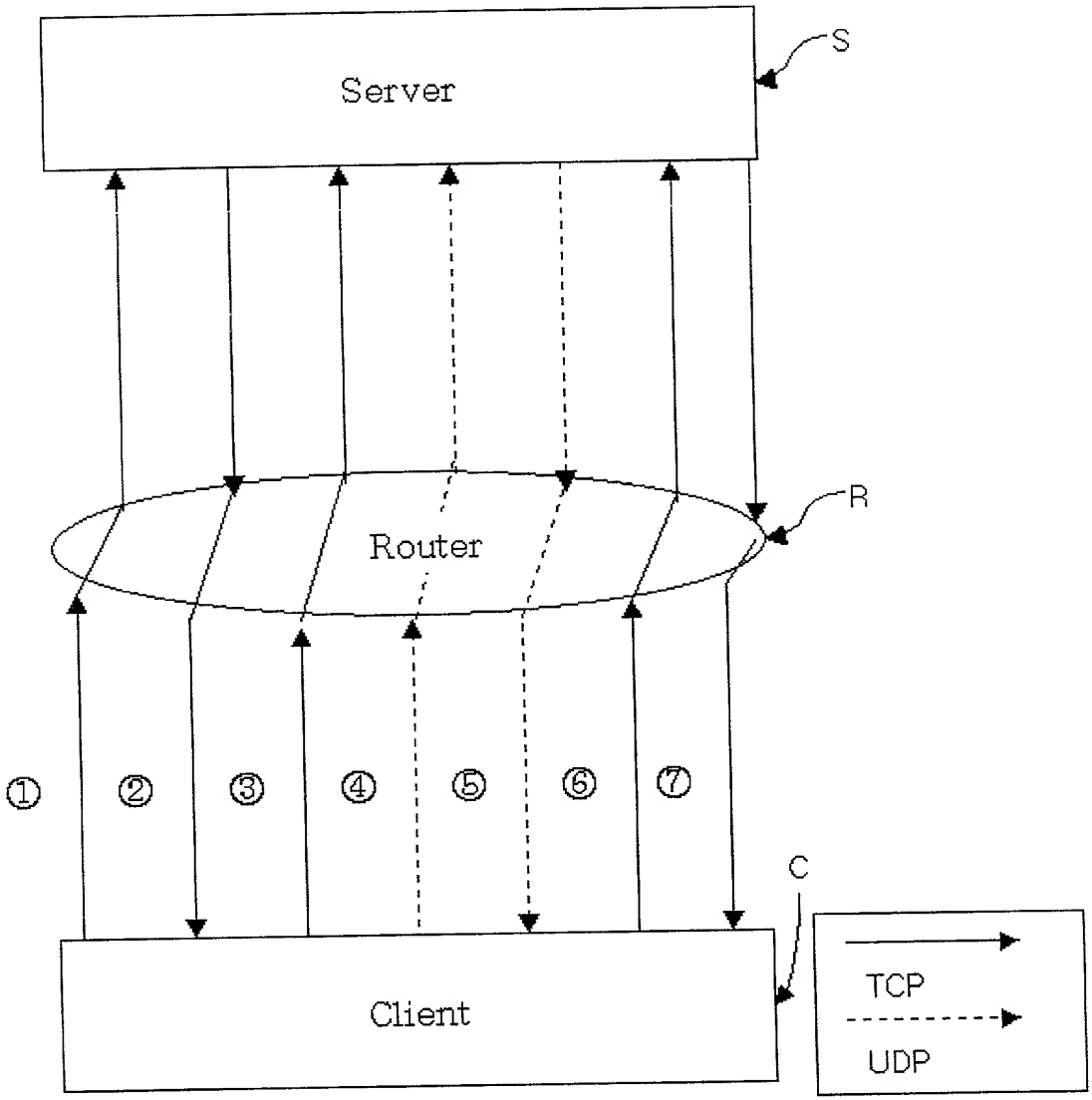


Fig. 4

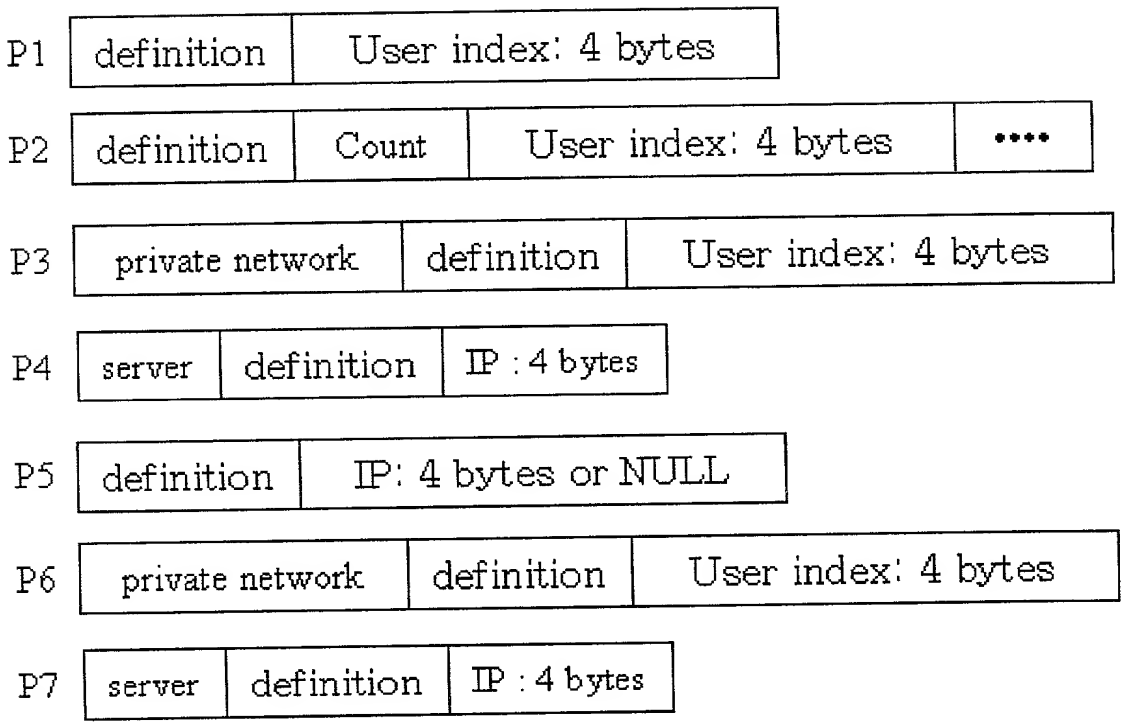

P1
definition
User index: 4 bytes
P2
definition
Count
User index: 4 bytes
••••
P3
private network
definition
User index: 4 bytes
P4
server
definition
IP : 4 bytes
P5
definition
IP: 4 bytes or NULL
P6
private network
definition
User index: 4 bytes
P7
server
definition
IP : 4 bytes

Fig. 5a

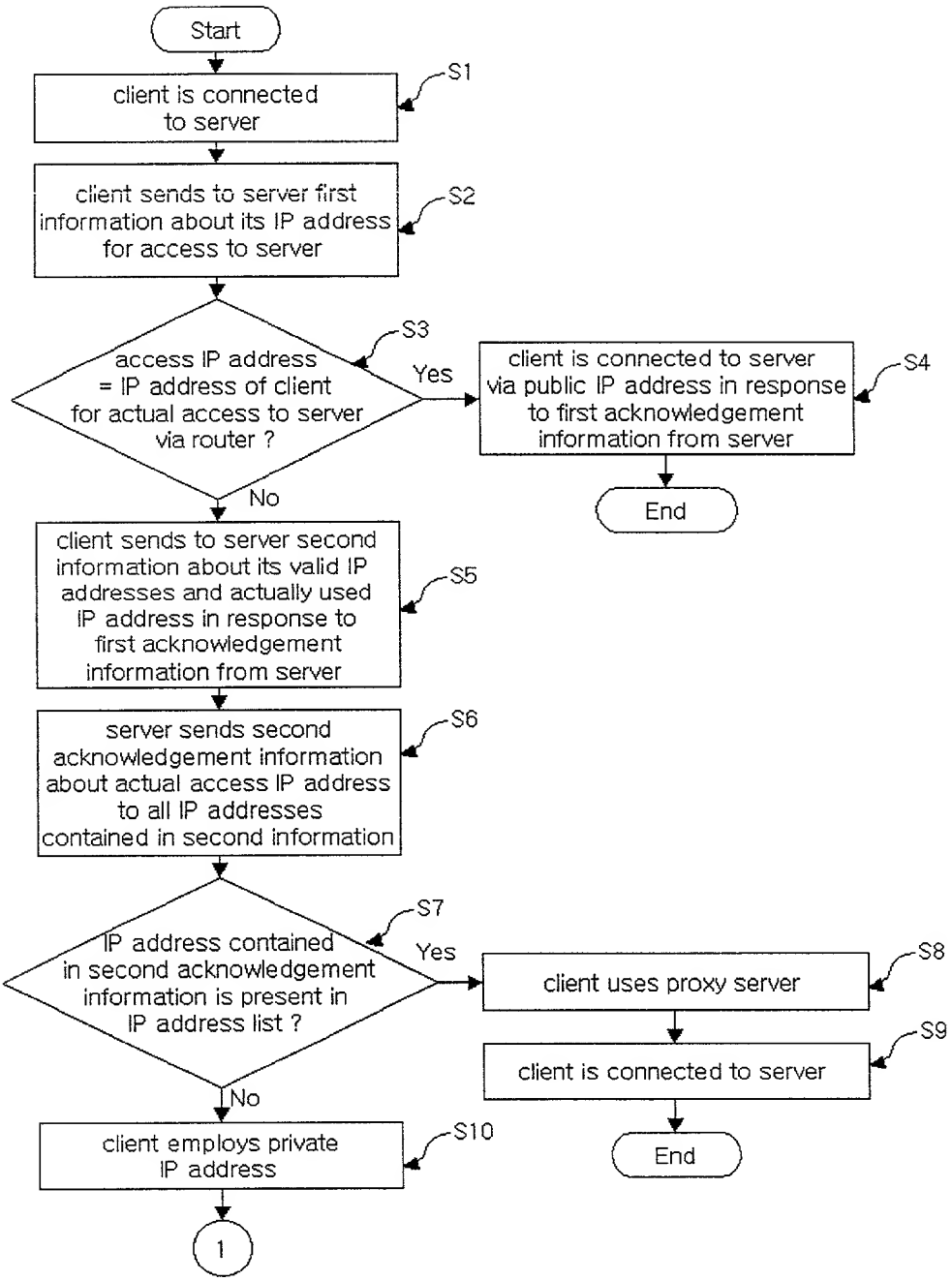
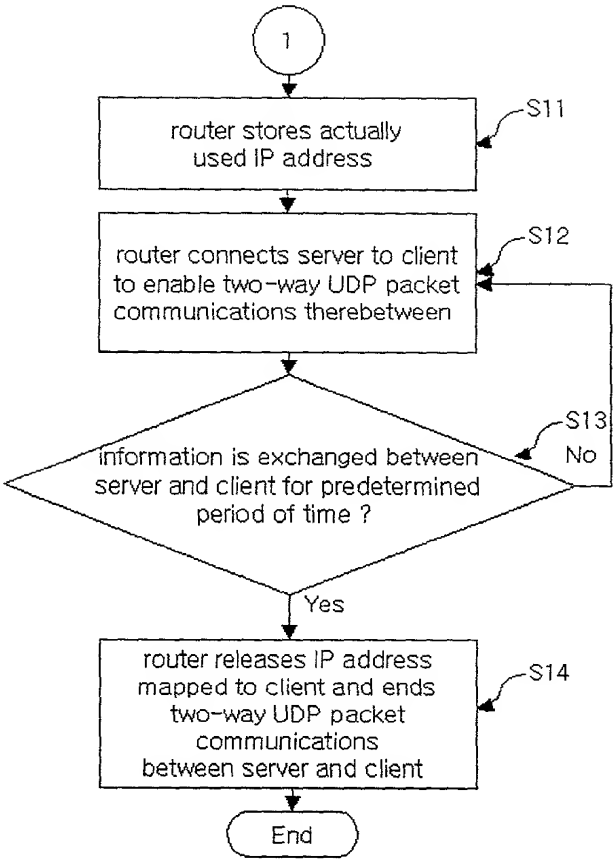

Start
client is connected to server
S1
client sends to server first information about its IP address for access to server
S2
access IP address = IP address of client for actual access to server via router ?
S3
Yes
client is connected to server via public IP address in response to first acknowledgement information from server
S4
End
No
client sends to server second information about its valid IP addresses and actually used IP address in response to first acknowledgement information from server
S5
server sends second acknowledgement information about actual access IP address to all IP addresses contained in second information
S6
IP address contained in second acknowledgement information is present in IP address list ?
S7
Yes
client uses proxy server
S8
client is connected to server
S9
End
No
client employs private IP address
S10
1

Fig. 5b


1
router stores actually used IP address
S11
router connects server to client to enable two-way UDP packet communications therebetween
S12
information is exchanged between server and client for predetermined period of time ?
S13
No
Yes
router releases IP address mapped to client and ends two-way UDP packet communications between server and client
S14
End